

GENERAL DESCRIPTION

STARTING/CHARGING SYSTEMS

1. General Description

A: SPECIFICATIONS

1. NON-TURBO MODEL

Item		Designation	
Starter	Type	Reduction type	
	Vehicle model	MT vehicles	AT vehicles
	Model	M000T83981	M000T86481
	Manufacturer	Mitsubishi Electric	
	Voltage and output	12 V — 1.0 kW	12 V — 1.4 kW
	Direction of rotation	Counterclockwise (when observed from pinion)	
	Number of pinion teeth	8	9
	No-load characteristics	Voltage	11 V
		Current	90 A or less
		Rotating speed	2,800 rpm or more
	Load characteristics		2,400 rpm or more
		Voltage	7.5 V
		Current	300 A
		Torque	8.6 N·m (0.88 kgf-m, 6.3 ft-lb) or more
		Rotating speed	16.0 N·m (1.63 kgf-m, 11.8 ft-lb) or more
Generator	Lock characteristics		740 rpm or more
		Voltage	4 V
		Current	3.5 V
	Torque		650 A or less
			940 A or less
			14.7 N·m (1.50 kgf-m, 10.8 ft-lb) or more
	Regulated voltage		28.9 N·m (2.95 kgf-m, 21.3 ft-lb) or more
	Type		
	Model	A2TB6291	
	Manufacturer	Mitsubishi Electric	
	Voltage and output	12V — 90A	
	Polarity on ground side	Negative	
	Direction of rotation	Clockwise (when observed from pulley side)	
	Armature connection	3-phase Y-type	
	Output current	1,500 rpm — 36 A or more	
		2,500 rpm — 65 A or more	
		5,000 rpm — 86 A or more	
	Regulated voltage	14.1 — 14.8 V [20°C (68 °F)]	

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2. TURBO MODEL

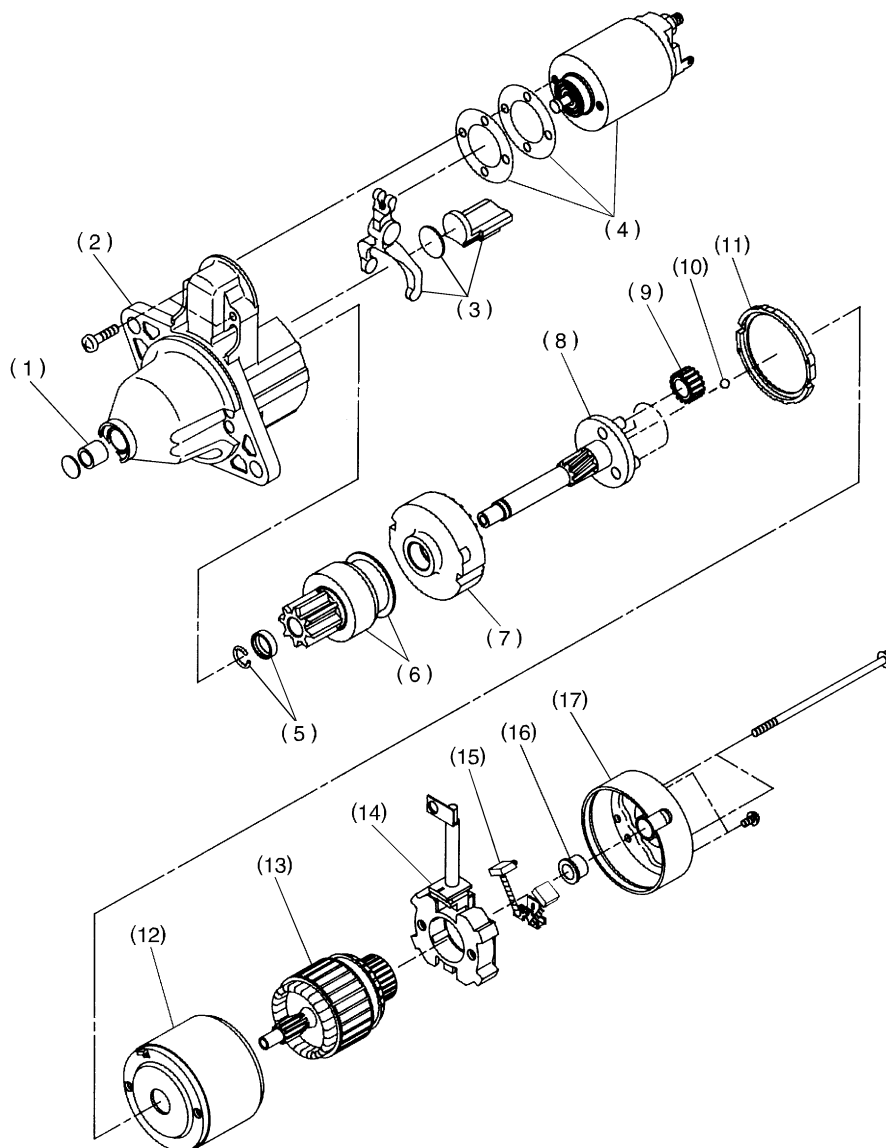
Item		Designation	
Starter	Type	Reduction type	
	Vehicle type	MT vehicles	AT vehicles
	Type	228000 — 9270	M001T86381
	Manufacturer	DENSO	Mitsubishi Electric
	Voltage and output	12 V — 1.0 kW	12 V — 1.4 kW
	Direction of rotation	Counterclockwise (when observed from pinion)	
	Number of pinion teeth	9	
	No-load characteristics	Voltage	11 V
		Current	90 A or less
		Rotating speed	2,860 rpm or more 2,400 rpm or more
	Load characteristics	Voltage	8 V 7.7 V
		Current	280 A 400 A
		Torque	9.3 N·m (0.95 kgf-m, 6.9 ft-lb) or more 16.0 N·m (1.63 kgf-m, 11.8 ft-lb) or more
		Rotating speed	860 rpm or more 740 rpm or more
Generator	Lock characteristics	Voltage	5 V 3.5 V
		Current	515 A or less 940 A or less
		Torque	16 N·m (1.63 kgf-m, 11.8 ft-lb) or more 28.9 N·m (2.95 kgf-m, 21.3 ft-lb) or more
	Type	Rotating-field three-phase, voltage regulator built-in type, with load response control system	
	Type	A2TB6291	
	Manufacturer	Mitsubishi Electric	
	Voltage and output	12 V — 75 A	
	Polarity on ground side	Negative	
	Direction of rotation	Clockwise (when observed from pulley side)	
	Armature connection	3-phase Y-type	
	Output current	1,500 rpm — 30 A or more	
		2,500 rpm — 64 A or more	
		5,000 rpm — 76 A or more	
	Regulated voltage	14.1 — 14.8 V [20 °C (68 °F)]	

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B: COMPONENT

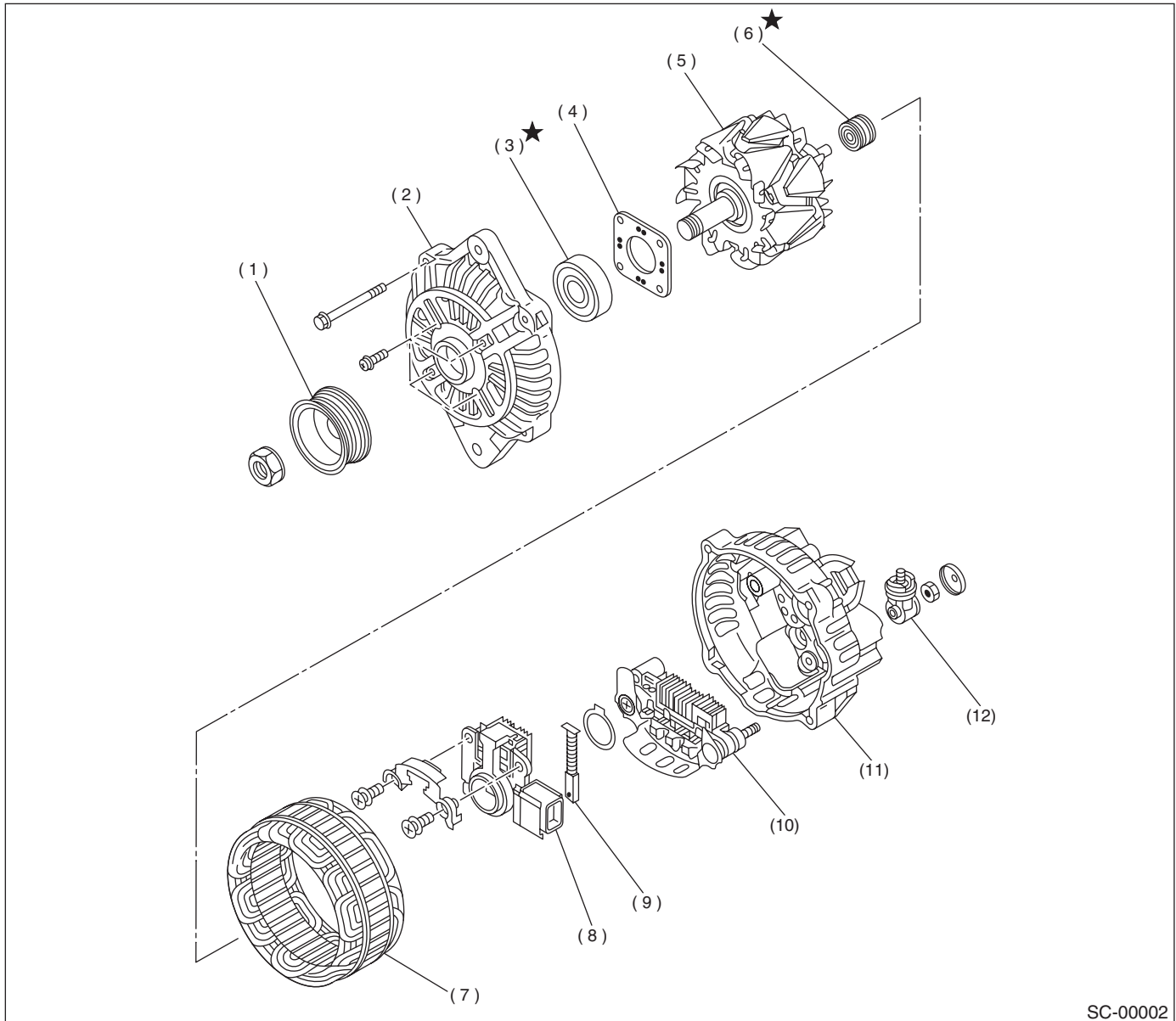
1. STARTER



SC-00168

- | | | |
|----------------------------|----------------------------|----------------------------|
| (1) Sleeve bearing | (7) Internal gear assembly | (13) Armature |
| (2) Front bracket | (8) Shaft assembly | (14) Brush holder assembly |
| (3) Lever set | (9) Gear assembly | (15) Brush |
| (4) Magnet switch assembly | (10) Ball | (16) Sleeve bearing |
| (5) Stopper set | (11) Packing | (17) Rear bracket |
| (6) Overrunning clutch | (12) Yoke assembly | (18) Rear cover set |

2. GENERATOR



SC-00002

- | | | |
|----------------------|-----------------------------|-----------------|
| (1) Pulley | (5) Rotor | (9) Brush |
| (2) Front cover | (6) Bearing | (10) Rectifier |
| (3) Ball bearing | (7) Stator coil | (11) Rear cover |
| (4) Bearing retainer | (8) IC regulator with brush | (12) Terminal |

C: CAUTION

- Wear working clothing, including a cap, protective goggles, and protective shoes during operation.
- Remove contamination including dirt and corrosion before removal, installation or disassembly.
- Keep the disassembled parts in order and protect them from dust or dirt.
- Before removal, installation or disassembly, be sure to clarify the failure. Avoid unnecessary removal, installation, disassembly, and replacement.
- Be careful not to burn your hands, because each part on the vehicle is hot after running.
- Be sure to tighten fasteners including bolts and nuts to the specified torque.
- Place shop jacks or safety stands at the specified points.
- Before disconnecting electrical connectors of sensors or units, be sure to disconnect the ground cable from battery.